

Developing Logistic Software Platforms: E-Market Place, a Case Study

Wilson Nieto Bernal; Daladier Jahba Molinares; Miguel A _ Jimenez-Barros; Carlos D. Paternina-Arboleda.

Abstract

This paper describes a framework for software development with emphasis on logistics platforms. Specifically, a case study is presented regarding the Logport program in Colombia's Caribbean coast. The software development is based on the merging of modeling, design, and agile development techniques aimed towards software production. The agile methodologies discussed herein include Scrum, XP, and Crystal among others, and specific verification and validation aspects of CMMI 1.3 are evaluated. Furthermore, the integration of emerging technologies including elastic computing in cloud computing that allows scaled integration, security, load balancing, process speed, and high concurrency among other features are discussed. Finally, the proposed solutions cover actual and emergent needs in a B2B or B2C electronic commerce dynamic environment where suppliers and clients offer and demand transport, storage, and customs services. In this environment, their goal is to ensure there is added value to their logistics processes starting at the inputs and all the way to the outputs of the commercial business processes. Colombia's Caribbean region is one such multimodal and multiport environment in which there is constant demand for low cost, time and storage optimization, and customs reliability for the businesspersons of this region, which serves as a Hub for the American Caribbean.

Keywords: Agile methodology; Enterprise architecture; Software process; Software validation; Cloud computing; Logistics software.